

STATISTICAL SOCIETY
12 JULY 25

Borough of



Wolverhampton.

REPORT

ON THE

HEALTH OF THE BOROUGH


OF

WOLVERHAMPTON

FOR THE YEAR 1888.

WOLVERHAMPTON:

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REPORT

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HEALTH OF THE BOROUGH

OF

WOLVERHAMPTON,

FOR THE YEAR 1888,

BY

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PRINTED BY ORDER OF THE SANITARY COMMITTEE.

MEDICAL OFFICER'S REPORT,

1888.

Prevalence and Prevention of Infectious Disease.

TAKING the total Zymotic deaths, we see (*table 9*) that the rate for this year is much below the average, this, however is owing to the almost complete absence of Summer Diarrhœa; considering the other Zymotics only, the year is on the whole, not much better than preceding ones, but this again is seen to be due to the severity of Measles and Whooping Cough—particularly the last, neither of which diseases are much within our control. If we are to regard the importance of the various Zymotics as being in proportion to their fatality amongst us, the averages for ten years, given in table 9, should greatly modify popular views; we see that Diarrhœa comes first, and is more than double Whooping Cough, the second on the list, just less than this is Measles, then, considerably less, Scarlet Fever; the other Zymotics being far behind. The low position which Scarlet Fever takes is of course due to the effect of preventive measures during several years, if the averages had gone one year further back, to include 1877, we should add a return of 226 deaths, and Scarlet Fever would stand second on the list and about 14 above Whooping Cough.

As far as we know, we have had no case of Small-pox in the Borough during the year; on the 14th of October, I admitted a patient into one of the rooms at the Administrative Block at the Borough Hospital, the case being suspiciously like Small-pox, and occurring under circumstances that rendered immediate removal necessary; fortunately it turned out to be only a severe case of Chicken-pox.

Measles.—The prevalence of Measles in the Borough, during the last eleven years, as shown by the deaths in table 9, has been very singular; there were epidemics in '79, '82, '84, and '86, and these show a progressively increasing severity, indeed, the '86 far surpasses the others, and its full extent is only seen when the First Quarter of '87 is added to it. Between these epidemics were periods of apparently almost complete remission; but since '86, we have a more or less severe constant prevalence, and the deaths again begin to assume epidemic proportions in the Last Quarter of the present year. The number of cases reported are seen in table 1, and the weekly deaths in the two Sub-districts in table 3. During the First Quarter there were many cases in Springfields, about Walsall Street and St. Matthew's Street, and some about North Street and the Whitmore Reans; in the Second Quarter there were still a fair number of cases in Springfields, a good many in the Whitmore Reans, and a considerable number in the Brickkiln Street and Salop Street vicinity; in the Third Quarter there was a great increase in the last mentioned neighbourhood, and but little elsewhere; finally, in the Fourth Quarter, it became epidemic in the area lying between Darlington Street and Dudley Road, and crossing the Dudley Road, invaded the East Sub-district; at the close of the year it had not materially passed these limits, so that the epidemic was very partial in character, mainly affecting the West Sub-district. The type of disease has generally been very mild, and the proportion of deaths to cases is much less than in '84 or '86. We have been fortunate in this, as a very fatal type of measles has been prevalent in some parts of the country.

Scarlet Fever.—Of Scarlet Fever we have had a few (twenty six) more cases reported than last year; looking at the Quarterly Returns of deaths in table 9, it will be seen we have really passed through a

period of extra severity, which has attained its maximum in the Last Quarter of 1887, and the first Quarter of this year; since this, it has declined, and during the Last Quarter of this year we have had comparatively few cases (forty) and only one death. It will be remembered that during the Third Quarter of 1887, we had a very threatening onset of Scarlet Fever, which, by active isolation at the Borough Hospital, was happily kept within bounds; since this, there has been no period of such special anxiety, but for the First Three Quarters of this year, the prevalence was very steady, and kept our hands full, and our accommodation at the Borough Hospital at times, over-full, in securing sufficient isolation. The following is a more detailed account of the disease in the Sub-districts:—In the Third Quarter of 1887, we had great trouble with Scarlet Fever in the East, energetic isolation reduced the prevalence to such a degree, that in the Last Quarter of that year less than one-third as many cases were heard of; these were nearly all removed to the Hospital; in the First Quarter of 1888 we had only fourteen cases, seven of these were in the neighbourhood of Dudley Road, and were all connected with the attendance of some children at school while the fever was in their home. The following cases are worth more particular record:—(*the numbers are from the general record of infectious cases heard of during the quarters*).

February 21st:—

Cases 109 and 110; *p* St. Matthew Street, A.B., æt 6 and M.B., æt $2\frac{1}{2}$; A.B., taken ill fourteen days ago with rash and sore throat, M.B., rash now out; doctor did not tell what was the matter. Mother was found nursing M.B., in her lap; Inspector strongly cautioned her about the infection; on returning a few minutes later he found she had laid down the child, and was in a neighbour's house; the doctor afterwards told the mother A.B., had Measles and M.B., Scarlet Fever. I visited on the 25th February, and found A.B., peeling very freely, and M.B., dying of Scarlet Fever; the death was certified to us as "pneumonia" simply; we removed A.B., to the Borough Hospital.

March 8th:—

Case 178; Chapel Street, J. A. R., æt 8, only child in house, fair chance to isolate, warned her uncle and aunt, whom she lived with, about the infection. A week later, the grossest negligence being found, Inspector Blanton called me to see the case, on my arrival we found the child had been carried off. Afterwards, we found (it was then peeling freely) it was taken by tram to Willenhall; the uncle and aunt were prosecuted and fined 20s. each and costs; exposing an infectious case.

Two of the cases reported this Quarter were very doubtful ones. Six in all were removed to the Borough Hospital.

In the Second Quarter 13 cases were reported, 1 was only heard of after death, 2 were past the infectious stage when heard of, 8 were removed to the Borough Hospital, 2 had also Whooping Cough and this prevented their removal, as we had no means for separating them from the other children then in the Hospital, besides, they had moderate facility for home isolation. In one case this Quarter we had to get a Magistrate's Order for removal, and its execution was resisted, next day, however, we were allowed to take the child quietly.

June 18th:—

Cases 164 and 165; St. Peter's Square; ill on May 22nd; same doctor who attended the cases mentioned Last Quarter, gave no caution; on June 16th, case 164 was brought to the General Hospital out-patient department and found peeling freely, on 165 being examined he was found in the same infectious state; both were then removed to the Borough Hospital.

In the Third Quarter 13 cases were reported, 7 were removed to the Borough Hospital, 1 was taken by its mother to the General Hospital, and detained there, (1 was a death), (1 was in the Workhouse,) 2 cases were on the Borough boundary, the surroundings not being very bad, as there were several cases outside the Borough, on the opposite side of the road, it seemed to me idle to remove our two; the thirteenth case was in a house which availed for isolation sufficiently to prevent our insisting on the child's removal; on our offer to remove the child being rejected we gave the fullest caution as to how isolation was required and should be effected; a few days after, the child (then peeling freely) was exposed on the footpath amongst other children; the father was prosecuted, and fined £3 and costs.

In the Fourth Quarter we had again 13 cases; 3 were isolated at home, 5 were removed to the Borough Hospital, the remaining 5 were all in one house, and only heard of when the parents asked for the disinfection of the premises; this instance illustrates how the infection will spread through a family when no proper precautions are taken, one week after the first child fell ill, the second was attacked, in another week, the third, in another, the fourth and fifth.

West Sub-district.—In the Third Quarter of last year, at the same time that we had the Scarlet Fever out-break in the East, we had a similar one in the West Sub-district, and, being in the rather better class area, we were able to isolate very few cases in Hospital, (only 7 out of 40). In the Fourth Quarter there was even a greater prevalence, but (for reasons explained in the '87 report), isolation was much better effected, (22 cases out of 48); hence, in the First Quarter of this year, there was a slight reduction in the number of cases, though nothing like that in the East. There were 45 cases, nearly all in the district lying between Salop Street and Dudley Road; a very fair amount of Hospital isolation was attained—27 being removed by us, besides which, 3 cases were removed to the General Hospital, from another public institution by its own authorities; 8 cases were heard of too late for removal, 7 of these being deaths; the following items are worth recording:—

January 12th:—

Case 21; a death, 6 other children in the house, ill for eleven days, *did not know it was Scarlet Fever until they got the death certificate.*
Reported to us by the Registrar.

January 26th:—

Case 45; 3 days ill, sister is now at school, at least 12 other cases connected with this same school.

February 2nd:—

Cases 55 and 56; 55 has been thirteen days ill, there are 3 other children from here now attending school; 7 other cases in the West, and the 7 previously referred to in the East, are connected with this school.

If we had had better information of these cases, I am confident we could have reduced the numbers; but we only made out some of them by instituting special enquiries at the schools.

In the Second Quarter the West cases fell to 29, still from the same area as last quarter's; 20 were isolated at the Borough Hospital; 4 were well isolated at home; 3 badly, but had opportunity enough; 1 was dead, and 1 dying when reported. We had two illustrations of the difficulty of disinfecting premises effectually, or of detecting the actual source of infection; at one house a case was found on April 23rd; on that day we removed the patient to the Hospital, and disinfected clothing and premises, on May the 5th, the 12th, and the 17th the same thing occurred, fresh case removed, and premises re-disinfected each time. On April 18th, two cases were reported at a

house, one having been ill for a fortnight, the other just taken ill, they were removed and the premises disinfected; on April 23rd, and May 5th, other cases occurred, the same steps being taken each time. These are exceptional instances, we seldom have a second, and very rarely a third case after a removal, unless so soon as to leave no doubt that infection had taken place before.

In the Third Quarter 40 cases were heard of, but 4 really belonged to the Second, having been over six weeks ill when heard of, so there was little increase in the cases really occurring. Twenty-four cases were removed to the Borough Hospital; 1, a man aged 29, was sent to the General Hospital, for the fee for admission there is much less than the cost of opening our second ward would have been. Of the remaining 15 cases, 8 (including the 4 old cases mentioned above) were almost past the infective stage when heard of, and were fairly isolated at home, 2 others were well, and 4 badly isolated at home; the removal of the last 4 was objected to, and the circumstances did not admit of its being pressed. Another case was only heard of after death. The following details are interesting:—

July 9th :—

Cases 28, 29, 30, and 31; Ann B., æt 30, Amy B., æt 16, Mary B., æt 14, Alice B., æt 9 months—Mother and three children; another daughter, Emma B., was servant at a house where two children were ill with sore throats, no doctor; Emma slept at home, and was herself ailing indefinitely; the four cases above developed Scarlet Fever in rapid succession.

August 15th :—

Cases 106 and 107; Annie S., æt 7, Alice S., æt 6; Annie ill sixteen days ago, mother thought it was measles, and had some medicine from a chemist; a week later Alice took ill. A Court Sweeper heard of, and reported the cases. On visiting, I found both peeling freely, after unsuspected Scarlet Fever.

August 24th :—

Case 129; A.F., æt 2. Inspector was just in time to prevent this child's mother sending his brother to a school children's tea party; no attempt whatever being made to isolate A.F.; I had the greatest difficulty in persuading the mother to allow of his removal.

In the Fourth Quarter we had 27 cases; 14 were taken to the Borough Hospital, 5 had good home isolation, 5 were long past infective stage when heard of, and had been fairly well isolated, 2 had

poor home isolation, but still too good to admit of our insisting on their removal, which was objected to. During the last three weeks only one case was reported, showing a marked decadence in the prevalence of the fever. The value of the Hospital removals can hardly be sufficiently estimated, unless it is taken into account from what hopeless (as regards limiting infection) surroundings nearly all our cases are removed; many of them are from families of 5 or 6 with two bedrooms; all are from districts where there is not the least prospect of isolation from the other members of the household, or from the children around.

The following table exhibits the cases and removals to the Borough Hospital in each Quarter, from each Sub-District.

QUARTERS.				1st.	2nd.	3rd.	4th.	Year.
EAST	Total	Cases ...	...	14	13	13	13	53
		Deaths ...	...	1	2	1	1	5
	Removals	Cases...	...	6	8	7	5	26
		Deaths	...	...	1	...	1	2
	Total	Cases ...	...	45	29	40	27	141
		Deaths ...	...	7	2	3	...	12
WEST	Removals	Cases...	...	27	20	24	14	85
		Deaths	...	...	...	1	...	1

In confirmation of the opinion expressed in last year's report, we find the work done at the Borough Hospital greatly increased; then there were 61 cases admitted; this year we have admitted 111; 20 remained in from last year; 118 cases went out well, and 3 died; leaving 10 cases in at the close of the year. The average stay of the 121 cases discharged was 42 days. I think it right to give a more definite report of an institution doing so much work as this. As may

be judged from the very low number of deaths, the cases were, on the whole, of a mild type; of the 121 cases discharged, 80 were very mild, needing no treatment except care and dieting; 11 were rather mild, needing some treatment; 8 were rather severe, but did not cause any special anxiety; 8 were severe cases needing every care and watchfulness; 14 were cases of the very worst type, recovery being hardly hoped for; four of these last were fatal, the reason why only three deaths figure in the Hospital Returns is that one case was very ill with bad complications and its parents insisted on removing it; I allowed them to do so, as the infectious stage was past, but warned them of the danger to the child; it died the following day at home. Our three deaths were due to meningitis; sloughing of the throat; severity of the attack, which killed the child within twenty-four hours of its admission. The commonest complication was abscess, this occurred in ten cases, in most rather badly; we had only one case of at all troublesome albuminurea. The temperature of the ward gave rise to much anxiety during some of the very severe weather, the amount of glass, and external wall, rendering it difficult to maintain it at a proper degree.

It is my duty to again point out that, though the above report shows the work done is thus satisfactory, and, as far as it goes, efficient; yet, in many respects, our power of isolation is far below what it ought to be; notably in the accomodation for staff; we have had to resort to such objectionable measures as having the attendants sleeping in the wards with the patients. Indeed, although we have two wards in the pavilion, we could not possibly use them both, for we could not provide for a sufficient staff in the partial Administrative block. This weakness would specially show itself in two directions, first, we would be utterly helpless if called on to deal with two diseases simultaneously. When the case of Chicken pox, which we suspected might be Small-pox, occurred, we had 12 cases of Scarlet Fever in the ward; we were compelled to isolate the Chicken-pox in one of the two bedrooms in the Administrative block; which would have been a risky proceeding had it really proved Small-pox. Again we have, occasionally, a case sent in as Scarlet Fever which proves some other disease; we cannot send such home while ill, and our only refuge has been the bedrooms in the Administrative block. Secondly, we are at present only able to cope

with what must be called a very moderate epidemic of Scarlet Fever, compared with some we have had in the past, not to go back to the 226 deaths in 1877, consider the 64 deaths in 1881, or the 46 in 1885, and it is at once evident, that arrangements which were over-taxed by a prevalence of the fever causing 17 deaths, would collapse in the face of so much severer epidemics. And this not merely because of the greater number of cases needing admission, but because of their greater severity; we can do very well with mild cases, or with only two or three bad ones in together—though this is a great overstrain—but we couldn't possibly have in many severe cases without a staff quite beyond what we can now accommodate; as pointed out above the average type of the disease this year was mild. In a case of greater difficulty, our only means of completing Hospital isolation at present, would be to largely use the wards at the General Hospital. We must further remember, that in this, (as in every work of advance, sanitary or other,) the more perfect we become, the more difficult it is to keep up to that stage of perfection; I have more than once pointed out the truth of this in connection with our ordinary Sanitary work, and deprecated the idea that with an improved condition, we would need diminished exertions and staff; but as regards isolation it is strikingly self-evident; the more perfectly we check the spread of each epidemic of Scarlet Fever, the larger is the number of children unprotected by a previous attack, and still too young to have attained that degree of immunity which is conferred by increasing age; therefore, we are on this account, more open to a severe epidemic, and also the ordinary prevalence of the fever must be high, and will need very careful watching and very complete isolation to prevent its extension to an epidemic. But all this is of course the result of a great gain, consider the incalculable amount of sickness, and the many deaths, that must be escaped before any approach is made to the position of ideal difficulty.

I must not leave this without a word of praise to Mrs. Chambers; her work has been very heavy, and she has had a position of the most trying responsibility and difficulty, both as regards the patients and the attendants; her duties have been well done, and the increasing popularity of the Hospital is undoubtedly due to her kind and judicious management.

The total 194 cases of Scarlet Fever have been heard of through the following sources :—Parish Medical Officers, 27, School Teachers, 5, School Board Officers, 15, Registrar of Deaths, 12, our own Inspectors, 37, Medical Attendants, 23, Parents, giving early information, 33, seeking disinfection, 16, Public Institutions, 4, Court Sweepers, 3, other sources, 19.

Diphtheria.—Diphtheria is so little reported that our record of it is almost useless; out of fourteen cases heard of this year, ten were deaths, and ten deaths must represent a very much greater number of cases than fourteen. Of those reported, in five cases no cause at all was made out; another case came ill from a distance; the possible causes in the other eight cases were as follows: 7, untrapped yard drain, 8, untrapped yard drain and rather defective sink drain; 9, had been looking down a manhole while it was being cleaned out, taken ill two days after; 10, had been watching a yard drain opened and cleaned, taken ill a couple of days after, in this case there was also an escape of sewer gas from an untrapped drain into the cellar; 11, (a death), here there was an enormous soft water cistern, under the whole kitchen floor, sewer gas was poured freely into the space above the water through a large overflow pipe in which the trap was dry, this space communicated directly with a chamber containing a w.c. cistern upstairs, by means of the open overflow pipe from this cistern and this chamber opened directly into the bedroom; when examined there was a in-draught of sewer gas through the w.c. cistern overflow pipe into this chamber; 12, (a death), the closets here, and at three neighbouring houses empty into large deep wet ash-pits; on the night when they were being emptied, this child complained of the stench, which was very bad, it was taken ill two days afterwards; 13, untrapped yard drain, and a bell trap in the cellar in a dirty and inefficient state; 14, untrapped yard drain, and the sink drain was untrapped, and connected directly with the drain.

Typhoid Fever.—We have heard of 23 cases in the East and 9 in the West Sub-District, but as with Diphtheria, these can only be a minority of the cases actually occurring; for 11 were deaths, and these would imply at least 60 or 70 cases, probably much more. The only time at which this Fever appeared with any severity at all, was in the First Quarter, when there were 17 cases in the East; but even then there

appeared to be no association of any number beyond, at the most, three cases. Nothing was made out to account for 11 of these cases; 2 were in one house, 3 in another; the other 7 all separate cases; they were only heard of from five to ten weeks after being taken ill. Of the 6 remaining cases, two were taken ill shortly after nursing another; in the other 4 the only points made out were 14, an untrapped yard drain; 15, untrapped yard drain, and a hole in the cellar, leading directly into the sewer; 16, had been charring at a house where some children were said to have been ill with Typhoid; 17, at his works the water was from a well, and was found to contain sewage matter. The 4 cases in the West were all separate; one was unaccounted for; another was taken ill after nursing a Typhoid case; in another case, the well water was found to contain sewage matter; in the fourth there was a bad escape of sewer gas from a defective w.c., soil pipe.

Next Quarter we had only 7 cases, 3 West and 4 East. Of the West, one was unaccounted for in any way; in another case there was an untrapped cellar drain; in the third, the pump water contained sewage matter. Of the East 4, one was in a house where the cellar drain was in a very filthy state, but nothing else was made out; the mother of the next case had been nursing the last; 3 and 4 had been nursing a brother who was said to have had Typhoid.

The Third Quarter there were 2 cases reported in the West—both deaths—and quite unaccounted for.

The Fourth Quarter we had 2 fatal cases reported in the East, one was in the Workhouse, and not accounted for; the other was for a long time unexplained, and a thorough examination of the drainage made out nothing, at length, by a mere chance, an old disused drain was found, connected with the main sewer, and pouring sewer gas freely into the house.

From such records as these, of Diphtheria and Typhoid Fever, the only lessons to be learned are special ones from the individual cases, the four following points are instructive. First, the gravity of those apparently trivial drainage defects so often associated with these cases. Second, the sudden and fatal attack of Diphtheria following on the emptying of those wet ash-pits mentioned above; it is often difficult to

persuade people of the danger of storing this decomposing matter, for the usual result of slightly impaired health, attracts no attention; but a case of this kind opens their eyes to the fact, that what can, in its intensity, thus destroy life, must, in its lesser degrees, be deleterious to health.

Third, we have three cases of Typhoid Fever associated with impure well water. We still find many owners of property who are unconvinced of the danger of wells in the town; now, it must be allowed that the whole sub-soil of the town is more or less impregnated with sewage matter, and therefore any water from this source must be very dangerous; so, if a town well is to supply good water, it must, first, go right down through an *impervious* stratum, to some pure-water bearing stratum below; second, the whole well, from the impervious stratum up, must be steined (built round) so as to be absolutely water tight, to prevent the impure sub-soil water from leaking in. Fancy the critical state of people relying on such a well for their water supply, at any time an unobserved crack may occur in the steining, allowing a leakage of sewage matter into the well; it is not right to submit anyone to such a risk. Moreover, even when actual sewage contamination does take place—the water being condemned by the Analyst—and we in consequence call on the owner to close the well, he usually cleanses the well, (whatever that may mean) and is quite indignant if we are not satisfied with this measure. Now it is plain that the sewage does not come from inside the well in the first place, but must come into the well from outside, and therefore cleansing the well is quite useless unless at the same time the source of the sewage is detected and cut off; this may in a few instances be over the top of the well, but in very nearly all it comes in with the water itself, and the only remedy is to cut off the water, altogether if the sole supply is from an upper stratum; from the upper stratum only, (by rendering the steining water-tight), if there is a deep stratum supply as well; and even this latter measure exposes the users to the constant risk of the upper impure water leaking in again.

The fourth point is not so much of public as of personal importance, but it is worth noticing; in seven cases of Typhoid Fever the possible source of infection has been more or less directly (nursing, &c.,) from other patients. The infection of this fever is only

contained in the discharges from the bowels, and can only be taken by swallowing; this usually happens in one of two ways, the discharges get into the ground without being disinfected, they are then washed through the ground by the rain, and in an extremely minute degree get into sources of water supply; or they may get dried and get about in the form of dust, this is apt to happen if a patient's linen gets soiled, it readily dries and gives off minute floating dust, some particles of which get inhaled and swallowed; it is plain from all this that it is only through ignorance or carelessness that the infection is ever conveyed directly, it could not take place at all if the vessels used, and all soiled linen, were properly disinfected. Some of the cases might have been infected from the same unknown source as the original patient, but in most of those reported this was very unlikely.

Whooping Cough.—We have had exceptional prevalence of this Zymotic all the year, the deaths being far above the average (see table 9) and not exceeded by any year since 1878. In 1882, the deaths were exactly the same number as this year; it was most severe in the West, (34, East 24), and during the First Quarter, when half the total deaths took place. This disease is at present altogether beyond our public control.

Diarrhœa.—We have not had to any grave extent this year; there was a Summer and Autumn epidemic as usual, but much below the average, and far below years of real severity; we had no real summer heat, and we have had heavy rains, which kept our court surfaces washed and our drains flushed.

GENERAL STATISTICS AND CONDITION OF THE BOROUGH.

We see, from table 9, that the year has been in many respects a very trying one; Measles and Whooping Cough both above the average; Scarlet Fever rather threatening; Phthisis and Chest Affections very high. Our annual death rate (19.5) is, however, the lowest but one recorded, that for 1885 was 19.4; it is noteworthy, as showing what a potent factor Summer Diarrhœa is, that in 1885, it was even less than this year. Our First Quarter was an awfully bad one, the weather was

very severe, and we suffer peculiarly from this on account of our elevated site, especially in our more exposed and poorer Sub-District, the East; the deaths from Phthisis and Chest Affections that Quarter were almost the highest on record, and the latter, as usual, were most fatal at extreme ages; with milder weather the death rate falls in the succeeding Quarters until in the Third it is extremely low; with a return of severe weather there was a slight rise in the Fourth Quarter.

From table 10 we see that, as compared with the average of the large towns, we were very much worse than them in the First Quarter, much worse than them in the Second Quarter, and rather better than them in the Third and Fourth Quarters; on the whole, this year we compare unfavorably. This is mainly due to the effects of cold, on both Sub-Districts, (but the East the most), in the First Quarter, and on the East alone in the Second. The Sub-District returns in table 10, shew that the excessive death rate in the first two Quarters is in the East; and our own returns show that this is due to Respiratory Diseases affecting those at extreme ages, and to a large number of deaths of very young children, returned as due to "Debility." These may be classed roughly as deaths of feeble people from exposure and poverty. The insanitary conditions which are more especially due to towns, as such, are mainly causes of air impurity, things which are of little consequence in the open country, becoming grave evils in a crowded town; such things are worst in hot weather, and we find the difference between the urban and rural death rates always much the greatest in very hot seasons, a difference due to Diarrhœa, which may be used as a rough index of these conditions. But there are other insanitary conditions than these, common to town and country, but greatly intensified in their effects by circumstances peculiar to the towns; such are defective structure of houses causing them to be cold and damp, or even not weather-proof at all; and these are intensified by town poverty, for the people who are compelled to live in such houses are the very poorest. Other things are, of course, also operative, such as insufficient food, firing, and clothing; but our work is not concerned with these. As regards this second class of insanitary conditions, they are only effective in bad weather, and returns such as those of this year point especially to them; Chest Affections being a rough index of them. We see in table 9, that in certain years, (*e.g.* 1879, 1885, and

1888), we have heavy Chest returns and light Diarrhœa ; in certain others (1878, 1880, 1882, and 1886) the reverse is the case ; the latter indicate the first class of Sanitary defects mentioned above, the former point to those which I am now drawing attention to.

These structural defects are, for many reasons, much more difficult to deal with than the others ; there is a tendency to regard them as not coming into our province at all, apparently because they rather affect the individual health than the public, anything causing air impurity does seem a more public evil than dampness in a room, which only cripples or kills the unfortunate person who has to live in it ; for my own part, I see but little more that is public in a leakage of sewer gas into a house from a hole in the soil-pipe, than in a leakage of rain from a hole in the roof. Certainly, although these matters may only affect the public health through individuals, yet returns such as the above show that they affect it to some purpose. As far as I can make it out, the position seems to be that the word "nuisance" in the Public Health Act, has become unintelligible, and, in consequence, if a man has a defective w.c., in his house, the landlord can be made to remedy it promptly, because the word "closet" occurs in a sub-section of clause 91, P.H.A., but as roof is not specified, if he has the rain coming in on his bed, through a hole in the roof, we can only proceed by the cumbrous method of declaring the house unfit for habitation, by order of the Council, and then turning the tenant out. If the P.H.A., sense of the word "nuisance" were the same as that of any good English Author, then, "premises in such a state as to be a nuisance or injurious to health," would fully cover such cases as leaking roofs, or walls damp from want of spouting, or those other structural defects I allude to ; but, apparently, nuisance has become so confounded with stink, that the plain sense of the word is lost. If this is so, then some further enactment is sorely needed, by which, when a man lets a house, it shall be understood to mean a healthy habitable house, just as at present, when he sells milk, it is understood, under the "Sale of Food and Drugs Act," to mean pure milk ; the compulsion in the one case would be no more than in the other, and is just as much wanted. The lack of any prompt method of procedure is especially irritating in these matters, for they urgently need prompt remedy, and under our present method, if we find a house damp with winter rain, it will be almost dry in the summer

sun before our machinery is operative ; and then, of course, proceedings are, for the time, unnecessary. I have been impelled to make these remarks, partly by our death returns, partly through the large number of complaints of this kind brought in by our Inspectors, and through having noticed during some winter inspections, the wretched state of repair in which many of the houses of our poor are kept ; there can be no doubt as to the importance of this factor in our insanitation.

The matters in connection with our Inspection Department are fully dealt with in the Annual Report of the sanitary Committee.

During the year, 1,154 notices were served for the abatement of nuisances ; 259 remained on hand from last year ; 1,363 were complied with. In addition to these, 1069 circular letters were served, and 507 complied with.

Unwholesome Food.—1 calf, 1 sheep, and 20 pigs have been condemned and destroyed as unfit for food ; of these notice was given. 1 sheep, 2 quarters of beef, and 3 rabbits were seized by our Inspectors and destroyed under Magistrates' orders.

Disinfection —130 houses have been disinfected with sulphur fumes ; 2,669 articles of clothing have been disinfected at the Borough stove.

EXPLANATORY REMARKS ON THE TABLES.

The Returns made by the Registrar for the East Sub-District include all deaths occurring in the General Hospital and Workhouse ; many of these are from outside the Borough, others from the West Sub-District, and others are returned as “no home” ; the particulars of these cases are all entered in table 7. In all the tables for the Sub-Districts the deaths are referred to where they belong, and in all the tables only cases belonging to the Borough are entered for the last three years, except in table 9, where the Borough totals include “no homes,” in order to compare with former years ; in table 8 the comparison between the Sub-Districts in all years before 1884 is misleading, as the East deaths include many really belonging to the West.

The populations of the Borough and of each Sub-District being estimated separately, the former is not the sum of the latter.

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diseases, &c., in the Borough, during the past 11 years.
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uting a comparison between Wolverhampton and other
Districts.

Area of the Borough, 3,440 acres.

Population 1881 (census April), 75,766.

TABLE No. I.

Cases of Infectious Disease heard of during 1888.

	EAST SUB-DISTRICT, POPULATION 39,180.					WEST SUB-DISTRICT, POPULATION 42,750.					BOROUGH, POPULATION 81,692.					TOTALS.			RATE PER 10,000 OF POPULATION.		
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year	East Sub-District	West Sub-District	Borough	East Sub-District	West Sub-District	Borough
Measles	46	40	10	57	153	26	48	87	199	360	72	88	97	256	513	252	617	869	64.3	144.3	106.3
5 yrs & upwards	29	26	4	40	99	18	35	65	139	257	47	61	69	179	356						
Under 5 years ...	3	6	4	3	16	17	8	18	5	48	20	14	22	8	64						
5 yrs. & upwards	11	7	9	10	37	28	21	22	22	93	39	28	31	32	130	53	141	194	13.5	32.9	23.7
Under 5 years ...	1	2	...	...	3	1	1	1	1	4	2	3	1	1	7						
5 yrs. & upwards	...	...	1	...	1	2	2	1	1	6	2	2	2	1	7	4	10	14	1.0	2.3	1.7
Under 5 years ...	...	...	...	1	1	...	...	1	...	1	...	...	1	1	2	23	9	32	5.8	2.1	3.9
5 yrs. & upwards	17	4	...	1	22	4	3	1	...	8	21	7	1	1	30						

TABLE No. 2.
Weekly RETURNS of BIRTHS and DEATHS during 1888.

1888.	Week ending	BIRTHS.												DEATHS.																																
		East Sub-District.				West Sub-District.				Borough.				East Sub-District.						West Sub-District.						Borough.						In Public Institutions.														
		Males.	Females.	Total.	Rate per 1000 per annum.	Males.	Females.	Total.	Rate per 1000 per annum.	Males.	Females.	Total.	Rate per 1000 per annum.	Males.	Females.	Total.	Rate per 1000 per annum.	Over 60 years	Under 1 year	Under 5 years	Uncertified.	Inquests.	Males.	Females.	Total.	Rate per 1000 per annum.	Over 60 years	Under 1 year	Under 5 years	Uncertified.	Inquests.	Males.	Females.	Total.	Rate per 1000 per annum.	Over 60 years	Under 1 year	Under 5 years	Uncertified.	Inquests.	Not belonging to Borough.	No Home.	Belonging to West Sub-Dist.	Total in Hospital	Total in Work-house.	
January	7...	26	17	43	57.2	16	10	26	31.7	42	27	69	44.0	11	14	25	33.2	6	8	9	...	3	14	9	23	28.0	7	3	13	...	3	25	23	48	30.6	13	11	22	...	6	2	...	2	2	5	
"	14...	15	11	26	34.6	16	16	32	39.0	31	27	58	37.0	15	10	25	33.2	8	5	8	...	2	14	8	9	17	20.7	3	6	9	23	19	42	26.8	11	11	17	...	2	4	...	6	2	2
"	21...	11	14	25	33.2	17	10	27	32.9	28	24	52	33.2	12	8	20	26.6	3	6	7	7	9	16	19.5	1	4	6	19	17	36	22.9	4	10	13	...	4	...	1	1	6	6	
"	28...	13	14	27	35.9	14	11	25	30.5	27	25	52	33.2	13	7	20	26.6	1	4	7	...	2	16	11	27	32.9	8	9	10	...	3	29	18	47	30.0	9	13	7	...	5	3	...	2	5	4	
February	4...	13	7	20	26.6	11	13	24	29.2	24	20	44	28.1	12	7	19	25.3	6	5	8	9	8	17	20.7	6	7	7	...	2	21	15	36	22.9	12	12	15	...	2	5	...	4	3	3	
"	11...	10	17	27	35.9	13	13	26	31.7	23	30	53	33.8	5	11	16	21.3	7	4	4	...	3	12	15	27	32.9	9	6	11	...	1	17	26	43	27.4	16	10	15	...	4	2	...	4	4	4	
"	18...	8	12	20	26.6	13	11	24	29.2	21	23	44	28.1	13	12	25	33.2	4	5	12	1	3	9	8	17	20.7	9	5	5	...	1	22	20	42	26.8	13	10	17	1	4	5	4	4	
"	25...	11	13	24	31.9	10	15	25	30.5	21	28	49	31.2	12	10	22	29.2	5	5	8	...	3	5	3	8	9.7	...	3	5	17	13	30	19.1	5	8	13	...	3	3	6	5	
March	3...	19	17	36	47.9	15	9	24	29.2	34	26	60	38.3	6	7	13	17.3	2	5	10	...	2	12	7	19	23.1	9	1	6	...	2	18	14	32	20.4	11	6	16	...	4	3	...	2	1	4	
"	10...	14	10	24	31.9	7	11	18	21.9	21	21	42	26.8	13	7	20	26.6	9	5	6	...	1	7	8	15	18.3	4	4	8	...	2	20	15	35	22.3	13	9	14	2	1	6	...	1	7	3	
"	17...	18	20	38	50.6	9	14	23	28.0	27	34	61	38.6	7	6	13	17.3	4	2	4	1	2	7	5	12	14.6	4	4	5	...	1	14	11	25	15.9	8	6	9	1	3	3	3	3
"	24...	11	11	22	29.2	15	11	26	31.7	26	22	48	30.6	6	6	12	15.9	1	3	7	...	1	14	4	18	21.9	3	5	7	...	1	20	10	30	19.1	4	8	14	...	2	2	...	2	3	4	
"	31...	12	8	20	26.6	13	8	21	25.6	25	16	41	26.1	7	10	17	22.6	3	3	5	...	1	8	7	15	18.3	5	1	4	15	17	32	20.4	8	4	9	...	1	2	...	2	3	3	
1st Quarter	...	181	171	352	36.0	169	152	321	30.1	350	323	673	33.0	132	115	247	25.3	59	60	95	2	23	128	103	231	21.6	68	58	96	2	14	260	218	478	23.4	127	118	191	4	37	41	...	18	43	51	
April	7...	8	16	24	31.9	13	15	28	34.1	21	31	52	33.2	11	3	14	18.6	1	5	6	5	7	12	14.6	7	1	2	16	10	26	16.6	8	6	8	1	1	2	2	4	
"	14...	18	21	39	51.9	10	14	24	29.2	28	35	63	40.2	12	10	22	29.2	4	7	11	1	1	15	7	22	26.8	4	7	9	1	1	27	17	44	28.1	8	14	20	2	2	3	...	1	5	2	
"	21...	15	17	32	42.6	10	14	24	29.2	25	31	56	35.7	14	3	17	22.6	3	6	8	1	1	8	5	13	15.8	4	4	6	...	2	22	8	30	19.1	7	10	14	1	3	4	4	1	
"	28...	16	19	35	46.6	8	16	24	29.2	24	35	59	37.6	11	13	24	31.9	7	8	11	1	2	4	6	10	12.2	4	1	3	15	19	34	21.7	11	9	14	1	2	3	1	...	1	6	
May	5...	13	18	31	41.2	15	13	28	34.1	28	31	59	37.6	10	6	16	21.3	2	7	10	...	1	7	8	15	18.3	6	1	2	17	14	31	19.7	8	8	12	...	1	3	5	...	
"	12...	14	15	29	38.6	18	9	27	32.9	32	24	56	35.7	9	8	17	22.6	5	1	5	...	4	12	4	16	19.5	5	4	5	21	12	33	21.0	10	5	10	...	4	3	2	3	
"	19...	10	15	25	33.2	15	13	28	34.1	25	28	53	33.8	11	8	19	25.3	6	4	9	...	2	8	7	15	18.3	2	5	6	2	2	19	15	34	21.7	8	9	15	2	4	4	1	5	
"	26...	12	13	25	33.2	12	13	25	30.5	24	26	50	31.9	7	8	15	19.9	3	2	9	1	1	7	4	11	13.4	5	2	4	...	1	14	12	26	16.6	8										

TABLE No. 3.—Weekly Returns of Deaths from various diseases in the Sub-Districts.

[illegible]

TABLE No. 4.
WEEKLY METEOROLOGICAL REPORT.
From observations taken at the Park Meteorological Station at 9 a.m. daily.
(Height above Sea Level, 430.25 feet. Receiving surface of rain gauge 1ft. above ground.)

Week ending		Barometer uncorrected.			Average Humidity.	Temperature.					Rain.	Wind.	
		Highest.	Lowest.	Att. Ther		Max.	Min.	Mean.	Earth.			Prevailing Directions.	Total in Week.
									1-ft.	4-ft.			
1888		In.	In.	°	0—100	°	°	°	°	°	In.		Miles.
January	7th	29.850	29.150	40	95	49.5	25.0	38.4	36.0	41.5	.28	SW.	1825
"	14th	30.255	30.050	40	99	54.0	26.5	36.2	39.0	42.0	.06	SW. SW. NE.	500
"	21st	30.200	29.600	40	96	51.0	28.0	32.7	36.5	42.0	.22	NE. E. SW.	1610
"	28th	30.000	29.450	40	91	52.0	25.0	39.9	39.8	41.5	.12	W. SW. NW.	1915
February	4th	29.900	28.900	40	92	48.0	18.0	34.8	35.8	41.5	.23	W. NE. W.	1085
"	11th	29.900	29.200	40	88	49.0	30.0	41.3	39.6	41.0	.23	SW. W. NW.	1602
"	18th	29.800	29.050	40	91	40.0	17.0	29.2	36.8	41.0	.19	W. NE. N.	1448
"	25th	29.650	29.150	40	90	37.0	22.0	29.3	35.4	40.5	.39	NE.	2175
March	3rd	30.050	29.600	35	88	39.0	16.5	29.3	35.1	40.0	.18	NE. NE. N.	1680
"	10th	29.600	28.880	40	85	55.5	26.5	41.6	38.8	40.0	.58	N.W. W. SW.	2040
"	17th	29.450	28.450	40	95	46.5	25.5	34.1	39.9	41.0	.62	N. SW. E.	1710
"	24th	29.900	29.000	40	87	51.0	24.0	32.9	38.5	41.0	.31	NE. NE. W.	1525
"	31st	29.350	28.350	40	93	49.0	26.0	35.1	38.0	41.0	.97	W. NW. E.	1085
April	7th	29.850	29.350	40	84	50.0	22.0	35.1	40.0	41.0	.07	N. SW. N.	710
"	14th	29.650	29.350	40	79	56.0	26.0	40.0	41.8	41.0	.12	NE. NW.	1380
"	21st	29.475	29.150	50	87	57.0	36.0	43.9	45.6	43.0	1.39	SW. SW. NE.	1450
"	28th	29.800	29.350	50	86	61.0	31.0	39.9	44.3	44.0	.32	NE. NE. NW.	2295
May	5th	29.850	28.850	50	77	57.0	36.0	44.7	46.3	45.5	.22	SW. SW. NW.	2190
"	12th	30.050	29.850	55	80	66.0	32.0	48.0	49.1	45.5	.05	SW. W. N.	1020
"	19th	29.850	29.100	55	78	75.0	35.0	49.9	50.7	46.7	.21	NW. SW. SW.	1680
"	26th	30.080	29.700	60	70	69.0	35.0	50.0	54.2	48.0	—	W. NE. NE.	1055
June	2nd	29.850	29.220	60	78	70.5	40.0	49.5	53.3	48.5	.29	SW. SE. NE.	1525
"	9th	29.800	29.200	60	84	71.0	41.0	52.2	54.2	49.5	.85	SW. NE. SW.	1315
"	16th	29.750	29.350	60	74	66.0	41.0	51.5	55.3	50.0	.24	SW. NW.	855
"	23rd	29.875	29.650	60	83	68.0	37.0	51.4	56.2	52.0	.40	NE.	1405
"	30th	29.800	29.200	60	84	80.0	45.0	57.4	59.7	53.0	.62	E. SW. N.	1155
July	7th	29.650	29.100	60	87	69.0	43.5	52.9	58.0	53.0	1.44	SW. W. NE.	1290
"	14th	29.750	29.400	60	85	67.0	36.5	51.3	56.1	53.5	.97	SW. N.W. N.	1255
"	21st	29.500	29.100	60	93	71.0	48.5	56.7	58.3	54.0	1.94	E. NE. S.W.	680
"	28th	29.450	29.200	60	85	66.0	46.0	55.8	58.5	54.0	1.33	SW.	1535
August	4th	29.850	29.170	60	86	67.0	41.0	51.9	57.1	54.5	.75	NE S. W.	760
"	11th	29.800	29.450	60	86	80.0	45.0	59.9	59.5	54.5	.17	SW. N. W.	860
"	18th	29.900	29.400	60	74	68.0	38.5	51.7	58.9	55.5	.14	W. N. NE.	880
"	25th	29.850	29.300	60	88	68.0	44.0	55.6	58.5	55.5	.76	SW. W. SW.	1090
September	1st	29.950	29.450	60	85	68.0	43.0	52.9	57.4	55.0	2.43	SW. SW. W.	1305
"	8th	30.050	29.600	60	89	70.0	37.0	53.8	57.3	55.0	.89	SW. NW.	765
"	15th	30.100	29.800	60	85	66.0	35.0	50.9	55.0	55.0	.02	N. W. E.	718
"	22nd	30.000	29.800	60	89	65.5	40.0	52.4	55.8	54.5	—	NE. N. E.	617
"	29th	29.900	29.450	60	92	64.0	32.0	48.6	53.7	54.5	.08	NE.	815
October	6th	29.450	29.000	60	80	52.0	27.5	40.0	49.5	53.0	.38	NW.	685
"	13th	29.850	29.550	60	89	57.5	26.0	43.4	47.8	51.5	—	NW. W. N.	552
"	20th	30.000	29.800	55	90	57.0	26.5	41.6	46.6	51.0	—	W. SE.	578
"	27th	30.050	29.550	55	91	64.0	29.0	46.8	46.2	50.0	.02	E. SW. SW.	1435
November	3rd	29.800	29.150	55	93	63.0	40.0	47.6	49.6	49.5	1.05	SW E.	1490
"	10th	29.500	29.400	50	91	51.0	30.5	39.6	45.1	49.0	1.20	SE. E.	2195
"	17th	29.600	29.050	50	93	58.0	36.0	47.5	46.2	48.5	1.20	SE. SW. SW.	2095
"	24th	29.750	29.400	50	83	54.0	35.0	46.7	46.5	48.0	.30	W.	2930
December	1st	29.400	28.600	45	91	54.0	30.3	42.5	45.3	48.0	.86	SW. SW. E.	1556
"	8th	29.726	29.420	45	93	57.0	38.2	48.2	46.7	47.5	.42	SW.	1704
"	15th	29.950	29.800	45	94	44.0	27.0	33.7	42.2	47.0	—	SE. S. W.	715
"	22nd	30.050	28.600	45	93	48.5	24.0	39.3	41.1	46.0	.47	SW. S.	1615
"	29th	29.500	28.500	45	93	48.5	26.0	38.9	41.8	45.0	1.65	SW. S.	1130



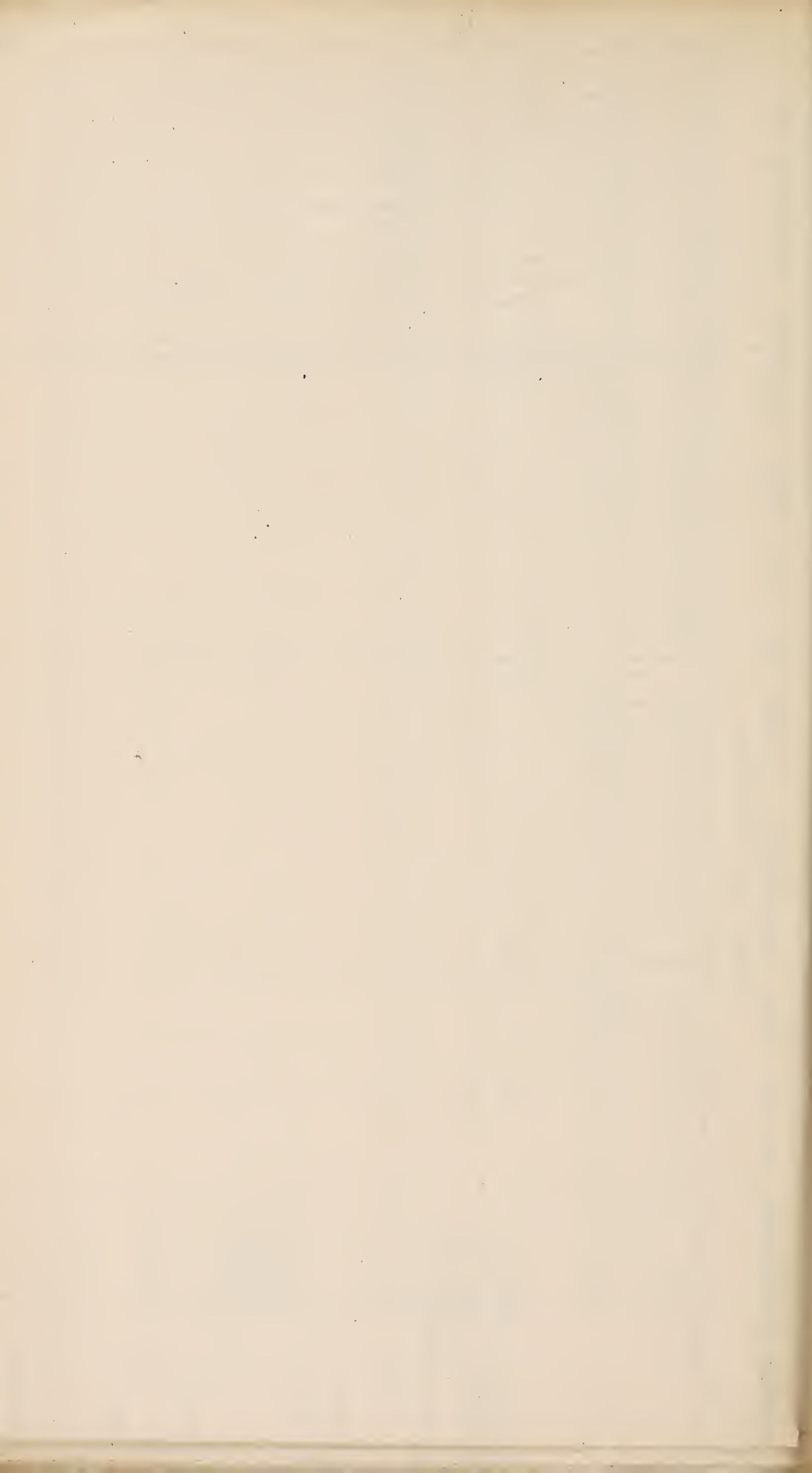


TABLE No. 7.

TABLE OF DEATHS during the Year 1888, in the Urban Sanitary District of WOLVERHAMPTON; classified according to DISEASES, AGES, and LOCALITIES, showing also the Population of such Localities, and the Births therein during the Year, and the proportion of Deaths which occurred in Public Institutions.

NAMES OF LOCALITIES adopted for the purpose of these Statistics.				Population at all Ages.		Registered Births.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.						MORTALITY FROM SUBJOINED CAUSES DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																		
				Census, 1881.	Estimated to middle of 1888.		At all Ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 60	60 and upwards.	12	14	15	16	17	18	Cont'n'd Fevers				24	25	26	27	28	29	30	31	32	33
1	2	3	4	5	6	7	8	9	10	11	12	14	15	16	17	18	Enteric or Typhoid.	Other or Doubtful.	Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia	Puerperal Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	All Other Diseases.		
East Sub-District	38,610	39,180	1,408	812	254	114	31	35	202	176	Under 5	12	4	3	11	23	1	...	24	...	1	...	...	...	16	100	1	6	166
											5 upwards	...	1	...	1	1	4	1	6	...	1	2	1	1	63	97	38	23	204		
West Sub-District	37,156	42,750	1,266	768	188	123	34	27	173	223	Under 5	26	10	3	2	32	1	...	28	...	2	...	...	...	4	71	...	4	128
											5 upwards	1	2	4	4	2	5	...	2	2	2	1	...	...	58	93	38	16	227
TOTAL IN BOROUGH	75,766	81,692	2,674	1,580	442	237	65	62	375	399	Under 5	38	14	6	13	55	2	...	52	...	3	...	...	...	20	171	1	10	294
											5 upwards	1	3	4	5	3	9	1	8	2	3	3	1	1	121	190	76	89	431		
General Hospital ... ..	...	...	...	147	6	13	18	11	77	22	Under 5	...	.	1	...	...	...	...	...	...	...	...	...	...	3	..	9	6	
											5 upwards	...	...	2	...	...	2	...	...	3	2	1	...	1	2	24	17	30	44
Workhouse ... ..	...	...	...	148	13	5	4	6	34	86	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	5	5	...	...	8
											5 upwards	...	...	..	...	..	1	..	1	...	...	1	...	...	19	10	10	1	87
Deaths occurring in public institutions in the East Sub-District and not belonging to the Borough	...	...	...	117	5	9	11	6	40	46	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	3	4	...	4	3
											5 upwards	...	...	1	...	...	1	...	...	2	1	1	...	..	4	13	12	14	54
Deaths occurring in public institutions in the East Sub-District and entered as 'no home'	...	...	...	15	3	...	1	...	4	7	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2
											5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	1	...	7
Deaths occurring in public institutions in the East Sub-District and belonging to the West Sub-District	...	...	...	61	4	4	4	1	27	21	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	3	3	
											5 upwards	...	...	1	...	...	...	...	...	1	...	...	...	...	4	9	5	8	25



TABLE No. 8.
COMPARATIVE DEATHS AND DEATH RATES of the East and West
Sub-districts for the past Sixteen Years.

Year.	EAST SUB-DISTRICT.				WEST SUB-DISTRICT.				BOROUGH.				Estimated population at the middle of the year.		
	Number of Deaths.	Rate per 1000	Zymotic Deaths.	Rate per 1000	Number of Deaths.	Rate per 1000	Zymotic Deaths.	Rate per 1000	Number of Deaths.	Rate per 1000	Zymotic Deaths.	Rate per 1000	East.	West.	Borough.
1873	1,125	29.7			631	19.8			1,756	25.1			38,010	31,831	69,906
1874	1,048	27.6			627	19.3			1,675	23.6			38,087	32,463	70,636
1875	1,155	30.3			640	19.3			1,795	25.2			38,163	33,108	71,373
* 1876	1,099	28.2			655	19.0			1,754	23.9			38,241	33,766	72,118
1877	1,157	30.2			611	17.8			1,768	24.3			38,318	34,436	72,871
1878	1,081	23.2			644	18.4			1,725	23.4			38,396	35,119	73,632
1879	1,093	28.5			608	17.0			1,701	22.9			38,474	35,817	74,402
1880	960	24.9			629	17.2			1,589	21.1			38,552	36,528	75,178
* 1881	998	25.9			650	17.5			1,648	21.3			38,629	37,253	75,963
1882	1,056	27.3			657	17.3			1,713	22.3			38,708	37,993	76,756
1883	1,042	26.9			601	15.5			1,643	21.2			38,786	38,748	77,557
1884	1,158 954	29.8 24.6	221	5.6	699 753	17.7 19.1	115	2.9	1,857 1,707	23.7 21.8	336	4.3	38,864	39,516	78,367
* 1885	1,012 813	25.5 20.5	102	2.5	658 720	16.0 17.5	74	1.8	1,670 1,533	20.7 19.0	176	2.1	38,943	40,301	79,185
1886	1,125 933	28.9 23.9	182	4.6	697 746	17.0 18.2	156	3.8	1,822 1,679	22.8 21.0	338	4.2	39,022	41,101	80,012
1887	1,133 918	29.0 23.5	122	3.1	659 720	15.7 17.2	102	2.4	1,792 1,638	22.2 20.3	224	2.7	39,101	41,917	80,847
1888	1,005 812	25.7 20.7	95	2.4	707 768	16.5 18.0	121	2.8	1,712 1,580	21.2 19.4	216	2.6	39,180	42,750	81,692

* These years contained 53 weeks.

TABLE No. 9.

	Quarters ending				1878	Quarters ending				1879	Quarters ending				1880	Quarters ending				1881	Quarters ending				1882	Quarters ending				1883†	Quarters ending				1884	Quarters ending				1885	Quarters ending				1886	Quarters ending				1887	Quarters ending				1888	Annual Averages for the Ten preceding years	
	30/3	29/6	28/9	28/12		29/3	28/6	27/9	27/12		27/3	26/6	25/9	25/12		26/3	25/6	24/9	31/12*		1/4	1/7	30/9	30/12		31/3	30/6	29/9	29/12		29/3	28/6	27/9	27/12		31/3	27/6	26/9	2/1*		3/4	3/7	2/10	1/1		2/4	2/7	30/9	31/12		31/3	30/6	29/9	29/12			
Small Pox	1	3	4	1	2	1	3	7	3	1	..	1	5	1.6							
Measles	2	7	9	21	27	3	1	52	...	2	1	3	6	1	1	18	41	2	4	65	11	66	20	1	98	1	1	8	103	111	19	4	7	1	31	9	6	5	19	39		37.4
Scarlet Fever	20	11	4	5	40	1	5	4	7	17	5	12	7	15	39	18	30	10	6	64	9	9	5	4	27	4	11	3	6	24	6	7	20	4	37	17	14	9	6	46	1	3	1	..	5	2	1	5	8	16	8	4	4	1	17		31.5
Whooping Cough	32	39	14	11	96	3	5	4	5	17	10	21	8	6	45	8	6	14	15	43	36	18	1	3	58	15	6	21	1	1	3	10	15	27	7	4	3	41	2	8	6	6	22	6	1	7	15	29	29	14	11	4	58		38.7
Diphtheria‡	3	2	5	2	3	1	...	6	1	...	1	2	4	...	1	1	2	4	...	1	1	4	4	3	...	2	1	6	5	...	1	4	10	6	3	...	1	10	...	3	1	3	7	4	4	1	1	10		5.7
Typhoid Fever... ..	2	5	6	6	19	1	2	2	1	6	8	1	...	7	16	3	2	5	2	12	1	2	2	2	7	2	4	2	2	10	3	...	1	5	9	2	1	...	1	4	3	1	1	4	9	1	2	5	6	14	2	5	2	2	11		10.6
Diarrhœa	6	9	68	10	93	11	6	18	13	48	10	3	75	23	111	1	8	27	10	46	15	7	56	9	87	7	4	29	16	56	4	8	113	15	140	4	6	26	14	50	6	10	98	35	149	6	4	90	5	105	4	7	30	19	60		88.5
Phthisis and Chest Affections...	117	96	58	162	433	186	163	64	185	598	133	115	81	104	433	156	119	78	110	463	147	119	83	108	457	163	114	83	115	475	120	142	89	146	497	157	113	75	149	494	159	100	76	145	480	169	119	75	146	509	184	134	94	143	555		483.9
Total Deaths belonging to Borough† ...	438	381	357	424	1600	469	408	271	415	1565	355	353	418	367	1493	440	400	341	371	1552	464	422	385	363	1634	468	372	341	361	1542	349	457	497	431	1734	466	369	312	417	1564	446	342	382	531	1701	447	394	417	406	1664	478	395	335	387	1595	1604.9	
Rate per 1000 per annum	23.8	20.7	19.4	23.1	21.8	25.3	22.0	14.6	22.3	21.1	18.9	18.8	22.3	19.5	19.9	23.2	21.1	18.0	18.2	20.1	24.2	22.0	20.1	18.9	21.3	24.2	19.2	17.6	18.6	19.9	17.8	23.4	25.4	22.0	22.2	23.6	18.7	15.8	19.6	19.4	22.3	17.1	19.1	26.6	21.3	22.1	19.5	20.7	20.1	20.6	23.4	19.4	16.4	19.0	19.5	20.76	
Zymotic Deaths	74	70	97	44	285	42	51	36	33	162	29	43	100	57	229	35	53	60	38	186	82	82	81	33	278	37	33	41	32	143	37	91	163	45	336	64	31	45	36	176	27	32	121	158	338	39	20	122	43	224	61	45	56	54	216	235.7	
Rate per 1000 per annum	4.0	3.8	5.2	2.3	3.8	2.2	2.7	1.9	1.7	6.1	1.5	2.2	5.3	3.0	3.0	1.8	2.8	3.1	1.8	2.4	4.2	4.2	4.2	1.7	3.6	1.9	1.7	2.1	1.6	1.8	1.8	4.6	8.3	2.3	4.3	3.2	1.5	2.2	1.6	2.1	1.3	1.6	6.0	7.9	4.2	1.9	0.9	6.0	2.1	2.7	2.9	2.2	2.7	2.6	2.6	3.40	
Total Deaths Registered	470	407	380	468	1725	520	436	299	446	1701	382	376	436	395	1589	478	419	362	389	1648	485	433	402	393	1713	498	410	358	377	1643	385	488	522	462	1857	501	394	335	440	1670	478	381	409	554	1822	480	424	451	438	1792	519	431	357	405	1712	1716.0	
Rate per 1000 per annum	25.6	22.1	20.7	25.5	23.5	28.0	23.5	16.1	24.0	22.9	20.3	20.0	23.2	21.0	21.2	25.2	22.1	19.1	19.0	21.3	25.3	22.6	21.0	20.5	22.3	25.7	21.2	18.5	19.5	21.2	19.7	24.9	26.7	23.6	23.7	25.3	19.9	16.9	20.7	20.7	23.9	19.1	20.5	27.8	22.8	23.8	21.0	22.2	21.7	22.2	25.4	21.1	17.5	19.8	21.2	22.18	
Sixty years of age and upwards ...	100	92	61	114	367	158	115	65	103	441	87	85	85	94	351	130	105	80	92	407	110	89	96	99	394	148	100	66	89	403	87	89	77	89	342	122	70	78	105	375	123	81	63	86	353	131	122	62	88	403	127	98	77	97	399	383.6	
Under one year of age... ..	128	97	134	129	488	110	99	82	135	426	91	101	164	103	459	100	93	107	110	410	120	115	127	71	433	109	93	118	99	419	91	113	184	118	506	85	106	83	114	388	106	95	148	140	489	98	95	171	104	468	118	102	111	111	442	448.6	
Under five years of age	211	178	202	203	794	174	178	124	197	673	144	157	228	171	700	163	164	150	176	653	223	207	180	130	740	168	145	156	147	616	131	227	289	190	837	164	154	115	165	598	162	146	221	305	834	181	134	235	188	738	191	165	148	175	679	718.3	
Deaths in Workhouse... ..	49	41	23	54	167	96	50	34	33	213	29	39	33	37	138	53	40	33	45	171	43	28	52	50	173	78	65	37	48	228	36	39	32	45	152	65	47	32	42	186	59	37	36	40	172	39	55	49	44	187	51	32	40	25	148	Annual Averages for the Ten preceding years	
Deaths in Hospital	38	21	14	35	108	35	21	24	40	120	23	22	18	28	91	32	24	27	18	101	27	19	19	28	93	34	29	21	17	101	41	39	25	30	135	50	33	26	27	136	27	45	30	27	129	44	29	37	32	142	43	49	26	29	147		
Inquests	20	17	18	18	73	26	20	22	20	88	23	20	21	24	88	20	13	29	19	81	33	19	13	32	97	28	21	20	19	88																											

‡ These include returns made as "no home."

* These Quarters contained 14 weeks, and the Years 53.

† After this year only deaths belonging to the Borough are included under the diseases and the different ages.

TABLE No. 10.

TWENTY-SEVEN LARGE TOWNS POPULATION 5,115,352.					WOLVERHAMPTON, POPULATION 81,692.			
					1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
Total Number of Deaths	...	...	...	...	507	425	348	404
Rate per 1000 per annum of Total Deaths	...	...	...	...	24.9	20.9	17.1	19.8
Deaths from Zymotics	...	...	...	...	2.8	2.0	2.7	2.2
Deaths from Measles	...	...	...	...	56	40	54	44
Deaths from Scarlet Fever	...	...	...	...	9	6	5	18
Deaths from Diarrhoea	...	...	...	...	7	4	4	1
Rate per cent. of Uncertified Deaths	...	...	...	...	4	7	30	18
Deaths under 1 year of age per 1000 Births	...	...	...	...	0.8	2.1	2.3	1.2
	...	...	...	...	177	143	181	171
EAST SUB-DISTRICT, POPULATION 39,180					WEST SUB-DISTRICT, POPULATION 42,750			
Total Number of Deaths	...	...	...	...	231	172	155	210
Rate per 1000 per annum of Total Deaths	...	...	...	...	21.6	16.1	14.5	19.7
Deaths from Zymotics	...	...	...	...	3.3	1.5	3.0	3.3
Deaths from Measles	...	...	...	...	36	17	32	36
Deaths from Scarlet Fever	...	...	...	...	4	1	5	17
Deaths from Diarrhoea	...	...	...	...	7	2	3	...
	...	...	...	...	1	2	14	13
Death rate per 1000 per annum, England and Wales	...	...	...	...	21.0	17.5	15.0	17.7
Urban Districts	...	...	...	...	21.3	17.7	15.7	18.9
Rural Districts	...	...	...	...	20.6	17.2	13.6	15.6

The above returns for Wolverhampton are taken from the Registrar General's, and include deaths not belonging to it; our rates for the quarters are at most 23.4, 19.4, 16.4, and 19.0; these include deaths returned as "no home."



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